AN ALTERNATIVE PLAN FOR SOLOMON ISLAND FORESTS AND ECONOMY.

Comparing the value of industrial logging for round wood export and small-scale sawmilling for timber export and local use.
SUMMARY OF KEY FINDINGS:

- The greatest financial value is from the two options that involved both moving to a ‘sustained yield’ harvest rate and halting round log exports, either with 100% community ecoforestry for sawn timber or the 50% community ecoforestry together with a forest carbon conservation payment.

- Community ecoforestry was found to be very profitable when focused on export grade sawn timber from premium species, and only moderately profitable across all species.

- Overall community ecoforestry for sawn timber was 58% more profitable to landowners and government than round logs for export. However, community ecoforestry would additionally provide: additional and ‘spin off’ economic activity, considerable village employment, particularly for young men, allow local communities to retain control over their forest resources, provide permanent house building materials, as well as maintain the forest for existing customary uses, carbon financing and the needs of future generations.

- A focus on community ecoforestry and sawn timber increases greatly the value gained by Solomon Island forest resource owners and sawn timber producers. The additional wealth of the landowners will mean greater income tax opportunities as a source of government revenue and well as greater overall local economic activity that will support the provision of services.

- If the stored carbon of the estimated 250,000 ha of unlogged commercial forest remaining in Solomon Islands was ‘carbon financed’ (instead of logging the forest) then it could provide an immediate minimum value of **US$159 million** to the Government and landowners.

- Further full economic analysis is required but it is expected that this will only further reinforce these findings, especially when environmental and social costs/benefits are considered, along with the Payment for Ecosystem Services such as forest carbon.

- Preliminary financial analysis indicates that there is an alternative viable path for the country that provides greatest value for the nation and would avoid predicted serious economic impacts from the collapse of the industrial logging sector by 2015.

- Government revenue can be sustained over the forthcoming years through immediately reducing harvest levels to the estimated ‘sustained yield’ level, or the ‘non-declining round log export rate’ together with a shift to local processing rather than round log export.

- Furthermore, the greatest financial value (NPV) for the nation is achieved through the substitution of logging for round logs by community ecoforestry for sawn timber production.

- For the ‘sustained yield harvest’ (non-declining) level it was found that there is a 35% increase in value to government and landowners through 25% of the harvest being community forestry producing sawn timber for export.
KEY RECOMMENDATIONS:

> The Solomon Islands Government places an immediate moratorium on all new logging licences and cancel any licences that are breaching their conditions or are not in compliance with the law.
> The Solomon Islands Government should set a goal of zero deforestation\(^1\) by 2015 including opposing all conversion of forests for plantations and seeking forest carbon finance incentive payments.
> By the end of 2008 the Solomon Islands Government phases out round log exports in favour of maximising local processing and value capture by the nation.

FURTHER RECOMMENDATIONS:

> Establish a national framework for forest carbon financing and forest protection incentive payments and facilitate private/voluntary market payments as well as bilateral funds.
> Support ‘Forests for Climate’\(^2\) as a mechanism for recognising and receiving payments for forest carbon conservation and REDD in the UNFCCC and other international forums.
> SIG should provide support and seek donor support for the rapid expansion of community ecoforestry together with small-scale sawmilling including immediate support for existing community forestry programmes.
> Request the Australian Government to reconsider its focus on exotic tree plantation development that involves the direct or indirect converting of natural forest and instead support community ecoforestry and forest carbon conservation.

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\(^1\) Zero Deforestation is an overarching goal which when implemented means:
- no deforestation
- no forest degradation
- a comprehensive network of forest protected areas including areas of strict protection and areas of community low impact and small scale forest use
- good forest management in all forests outside of protected areas (including FSC certified community and private sector forest management)
- respect for the rights of all indigenous and other forest dependent communities

\(^2\) ‘Forest for Climate’ is a mechanism that takes funds from the international carbon market and uses them to pay for deforestation credits gained by tropical forest nations not degrading forests or deforesting. See: [www.greenpeace.org/forestsforclimate](http://www.greenpeace.org/forestsforclimate)
1. INTRODUCTION:

The logging sector currently accounts for 67% of export receipts, 15% of domestic government revenue, and 15% of GDP. However the International Monetary Fund (IMF) recently predicted a rapid collapse of logging with commercial natural forests being logged out by 2014. The IMF, the Central Bank of the Solomon Islands and the Governor General of Solomon Islands have warned of serious financial, economic and social impacts when this happens. It is forecast that economic growth will decline to 1.5% per annum, down from 10% in 2007, largely due to a rapid decline in logging as commercial forests are logged out.

This report gives some background on the logging industry and its impacts, and presents a financial analysis that compares industrial logging for round log exports with community ecoforestry for sawn timber exports and domestic use. The analysis builds on work already carried out by the Australian Aid supported National Forest Resource Assessments, the Central Bank of the Solomon Islands, and the IMF, with the key new addition of financial data from the growing village-based small-scale sawmilling sector. Options for a different forestry sector future for the Solomon Islands are presented along with estimated profit and Net Present Value (NPV). Recommendations are made to the Solomon Islands Government and forest resource owners, and donor governments and institutions.

The Solomon Islands has 2.8 million hectares of forests, covering around 85% of the total land area. However, only one fifth (600,000 ha) of the natural forest area is suitable for commercial logging, and all remaining large intact forest areas (>50,000ha) are now only found in the poorly accessible hill and mountain areas (see Map). The loggable forest has been heavily exploited over the last two decades and current logging is out of control.

Industrial logging in Solomon Islands is dominated by foreign companies who along with local front companies and contractors, landowner agents and middlemen, and a compliant government, have been logging at a rate that is four times the estimated ‘sustainable yield’, or the level of non-declining harvest.

Further, many other reports and assessments have documented financial irregularities such as transfer pricing, misreporting and tax avoidance, serious environmental and social impacts, and how it is economically not as beneficial to local landowners as small-scale economic activity.

Solomon Islands Forests
Children of the Lobi community, Marovo Lagoon, sit on a newly cut tree from the Greenpeace-supported ecoforestry project in their village. Ecoforestry is one way to protect forests for future generations. © Greenpeace/Behning
2. OVERVIEW OF DESTRUCTIVE INDUSTRIAL LOGGING IN SOLOMON ISLANDS

Industrial logging began accelerating in Solomon Islands from the 1980s when Asian (mainly Malaysian and Korean) companies began entering the sector and when there was a shift from logging on government land to customary owned land. This post-colonial early independence period, under the Solomon Mamaloni-led government, moved relatively quickly towards economic reliance on logs for export and government revenue – 56% and 31% respectively by 1994. It was during this period that the log harvest began to exceed ‘sustainable yield’ levels, increasing from 261,000 m³ in 1987, to over 600,000 m³ in 1997, to a predicted 1,400,000 m³ in 2008 – over 5 times the sustainable rate. During the ‘ethnic tension’ period, from 1999 – 2003, logging unlike virtually all other commercial activities, continued to operate and expand, highlighting the ability of this sector to thrive in a weak governance environment.

During this period of unrestrained expansion there were many attempts to bring logging under control and considerable amounts of information released on its economic, social and environmental impacts. Australian aid funded monitoring and timber control capacity was installed several times over a 15-year period, and while the monitoring documented the problem well (an unsustainable sustainable yield rate of harvest), and even recommended establishing large conservation areas, the industry was not brought under control.

Australia’s response has been to recommend the establishment of plantations as a way of building the forestry sector, with these plantations converting logged over forest or old village garden sites. Australia has consistently ignored the potential for village-based portable sawmilling from natural forest such as community ecoforestry.

At least two Solomon Island governments (in 1994 and 1997/98) have attempted to reform the logging sector by cancelling licences and imposing a moratorium on new licences. However, they were short lived with these governments being overturned, allegedly through bribes from logging companies.

Solomon Islands courts have also found logging companies to be operating illegally but this has done little to slow the onward march of the industry to systematically log all the commercial forests of the country. In some situations there has been resistance from landowners, and while recently this has halted some logging, it has in the past been disastrous for some communities such as the 1995 murder of local community leader Martin Apa who opposed the logging of Pavuvu Island by Malaysian company Maving Bros Ltd.
Many serious social impacts resulting from logging have been documented over the last decade. These include: destruction of local water sources and desecration of sacred and burial sites, child sexual abuse and prostitution, increased disputes and conflict within a community, the breakdown of social structures, and hardship resulting from the loss and damage to forest resources that local people rely on for their everyday living.

Environmental impacts have been equally damaging and include: soil disturbance and erosion, sedimentation of streams and reefs, the loss of biodiversity and the regenerative capacity of forests. It is also now well recognised that tropical deforestation and degradation is a major contributor to greenhouse gas emissions (equal to 1/5 of global emissions) and dangerous climate change.

In some instances there has been a link between logging and complete forest conversion for oil palm plantations, where logging precedes the plantation development or is carried out under the guise of being an agricultural project. With rising international crude palm oil prices there is increased interest in an expansion of oil palm, making forest conversion following logging a significant threat to Solomon Islands forests.

Some of the most glaring failures of the logging sector have been in their financial affairs. A special audit by the Solomon Islands Dept of Forestry, Environment and Conservation in 2005 found that there was gross mismanagement in the forestry sector, and while logging companies were able to avoid paying much of their tax liabilities, large sums of money were being paid to forestry officials and diverted to unbudgeted expenditure. The Auditor General conclusions include:

- In 2004, there was an estimated SIS$29 million in forgone revenue to the Government in the granting of timber duty exemptions.
- Continuous breaches of agreement by the logging companies
- Unlawful ex-gratia payments, unaccounted for advances made to individuals from logging companies, timber royalty payments diverted to private accounts...

These types of practices are however not new. Problems with tax remissions and exemptions have been previously identified along with the ‘severe economic and financial disruption when the natural forest timber resource is depleted’. A major Australian Aid funded study in 1994 found losses to the Solomon Islands Government of SIS$94 million due to the underreporting of log prices. There is no evidence to suggest that any of these practices and their resultant financial losses to the resource owners and Government have abated in subsequent years, meaning the aggregate losses would now be in excess of a billion SIS.
3. COMPARATIVE FINANCIAL ANALYSIS - OF LOGGING FOR ROUND LOG EXPORT AND COMMUNITY ECOFORESTRY WITH SMALL-SCALE SAWMILLING.

This analysis calculates the Net Present Value (NPV) to the Solomon Islands Government (log tax and duties) and landowners (royalty and/or community ecoforestry profit) for both logging for round log export, and for a range of combinations with community ecoforestry using portable sawmilling for sawn timber export and domestic use. Two different resource harvest intensity scenarios were also analysed – the current exhaustive ‘boom and bust’ track of exploitation where commercial forests will be logged out by 2015 and a ‘sustainable yield’ rate of harvest where there is an assumed non-declining 248,000 m3/year34.

All data for the analysis was sourced from the Central Bank of Solomon Islands35, the IMF (2007) and the Ministry of Forests, Environment and Conservation (2006), with supplementary data on community ecoforestry and small-scale sawmilling from Village Ecotimber Enterprises (VETE), Honiara.

It is not a full economic analysis so the broader flow-on socio-economic impacts – such as local employment, housing, local services, and general contribution to the ‘quality of village life’ or the nations GDP – of the two different tracks were not considered. The potential additional value of further processing of and value adding to the sawn timber, or the broader benefits gained by Solomon Islanders controlling and managing their own resources were also not considered.

While there are obvious short-term financial incentives to liquidate the commercial forest resource as quickly as possible, the greatest financial value (NPV) for the nation is achieved through the substitution of logging for round logs by community ecoforestry for sawn timber. For non-declining ‘sustainable rate’, the substitution of a quarter of the log production gives a 35% increase in value (see Fig 1). Any of the options that involved the increased levels of local processing via small-scale sawmilling and ecoforestry increased the value to the nation. The greatest financial value is from the two scenarios that involved a ‘sustainable’ rate of harvest and halting round log exports, either with 100% community ecoforestry with sawn timber or the 50% community ecoforestry together with a forest carbon payment (see Fig. 1).
The analysis shows there is a forestry path other than the current ‘boom and bust’ one, which is expected to cause considerable economic hardship and disruption when log exports dramatically drop from 2010 through to 2015. Immediately moving to a ‘sustainable’ harvest rate and transitioning away from a focus and reliance on round log exports would transfer considerable value and wealth to landowners and community ecoforestry producers (see Fig. 2) and provide a moderate revenue stream for the government (Fig. 3). This would prevent the scheduled massive collapse of revenue to landowners and government. However, the additional wealth of the landowners will mean greater income tax opportunities as a source of government revenue as well as greater overall local economic activity that will support the provision of services.

Detailed financial analysis of small-scale community ecoforestry, which focuses on exporting sawn timber, found it to be very profitable, with an average net profit to the community of SI$1039 per m³ of sawn timber. However if total production, (including local sales) is considered, the average net profit was found to be moderate at SI$624 per m³. A straight comparison on a cubic metre basis found that for landowners this is 3-4 times the royalty received for an equivalent amount of round log harvested (see Fig. 4). For the government it is only a quarter of the tax revenue they would get from round logs. Overall, community ecoforestry for sawn timber would be 58% more profitable to landowners and government than round logs for export. Community ecoforestry would provide additional benefits like considerable village employment (particularly for young men), allow local communities to retain control over their forest resources, provide permanent house building materials, as well as maintain the forest for existing customary uses, carbon financing and the needs of future generations.

This analysis includes in the production costs an allowance for forest management training and support to ensure forests are well managed and meets the standards of the world’s premium certification schemes, the Forest Stewardship Council (FSC) and Fair Trade, which would ensure access to high value international markets. However, for current ecoforestry operations, these costs are largely subsidised by donor funded NGO support programmes - meaning current actual profitability to landowners is higher.

To support the rapid expansion of community ecoforestry and the retention of forests to maximise economic, environmental and social benefits, the Solomon Islands Government and bilateral and multilateral donors should consider funding expansive training and technical support.
4. VALUE OF ECOSYSTEM SERVICES

While most of these ecosystem services are currently not given a monetary value, it is clear that they will be more and more valued in the future. Several economic cost-benefit comparative studies have shown that even for forest products and services that have a market value, small-scale and subsistence uses exceed that of large-scale industrial exploitation. For the Marovo region, the small-scale and subsistence uses were found to be worth 3-4 times more to the local communities than logging and oil palm development.

There is a fast evolving opportunity for tropical forest countries to obtain payments for protecting the carbon stored in forests. For greenhouse gas polluting industrialised countries this has been identified as a low cost way of mitigating dangerous climate change. To degrade or clear tropical forest now means to forego this opportunity for significant income.

If the stored carbon of the estimated 250,000 ha of unlogged commercial forest remaining in Solomon Islands was ‘purchased’ (instead of logging the forest) then it could provide an immediate minimum return of US$159 million. There are an increasing number of examples of forest conservation financing deals where ecosystems services are being valued and paid for, such as through ‘Conservation Concessions’. In these deals, provided that participatory land use planning has been carried out, different categories of land use that ensure forest conservation, are acceptable (including harvest of non-timber forest products, ecotourism, and community ecoforestry) thereby further extending the income opportunities. Therefore it makes good financial and economic sense to maintain and protect the forest for future ecologically responsible use rather than trade just one of these ecosystem values (logs) for short-term financial gain to the detriment or destruction of the other values.

Greenpeace strongly supports mechanisms to value ecosystem services and to transfer that value equitably to those who own, have rights to, manage, or govern those forest ecosystems.

Services provided by ecosystems include climate regulation, water supply and regulation, erosion control, nutrient cycling, pollination, genetic resources, food and raw materials, recreation (e.g. ecotourism) and cultural/spiritual importance. ‘Ecosystem services’ are currently not valued by markets based economies. A highly regarded research team estimated the value of ‘ecosystem services’ of tropical forests to the global community to be worth US$2007/ha/year. This means the value of the ecosystem services for the 600,000 ha of Solomon Islands natural forest that is available for commercial logging is equivalent to US$1.2 billion annually, and much greater if all of the country’s forests are included.

Estimated at A$15-20 million, and according to URS the consultancy firm

NPV is defined as the future stream of benefits and costs converted into

SIMNR 1994,

IMF 2007,


IMF 2007


PNG is defined as the future stream of benefits and costs converted into equivalent values today.


Duncan 1994


AusAid and MFEC 2003

Estimated at A$15-20 million, and according to URS the consultancy firm implementing the project since 1999, the project was to contribute to the socio-economic development, peace building and the well-being of the people of the Solomon Islands and their environment by enhancing: the management of natural forests, growth of the forest estate through plantation development, revenue collection (from log exports) by landowners and the Government, and the capacity of the Forestry Division (FD) to effectively support and regulate this key sector of the Solomon’s economy.”

SIMNR 1994

AusAid & MFEC 2003, MFEC 2006


Martin Apa’s murder on October 30th 1995 has yet to be properly investigated by Solomon’s Police.


Herbert 2007

Greepense and Oliver 2001

Ibid


Office of the Auditor-General 2005: For example, in 1999 despite alarm bells being rung by NGOs and local landowners, Malaysian company Silvania were given approval to develop an oil palm plantation project on Vangunu Is in Marovo lagoon. To date only 700 ha has been planted and planting has stopped but the whole plantation development area has been logged out.

Office of the Auditor-General 2005


ADB 1998 p66

Duncan 1994

Ministry of Forests, Environment and Conservation 2006

Various annual reports

Assuming a conversion rate of sawmilling of 40% - to produce 1 m3 of sawn timber would require 2.5 m3 of round log.


At 1997 US$ values


Office of the Auditor-General 1999: Big Bay National Park Proposal and Opportunities for Sustainable Development. Unpublished report. October. 65p + appendices,

Lafanchi and Greenpeace Pacific 1999.

Lafanchi and Greenpeace Pacific 1999


Assuming a conservative 150Mt C/ha (t/ha) of intact natural forest (ranges recorded of 164 to 250 Mg C/ha. In: Gibb et. al 2007: ‘Monitoring and estimating tropical forest carbon stocks: making REDD a reality. Environmental Research Letters: 2 Oct-Dec 2007) and a carbon price of US$55/t C. (Carbon prices range from $5 to $30/tonne).

Examples of forest carbon financing include Harapin forest in Sumatra, Indonesia by Biocife International, and 750,000 ha of forest conserved with the support of an US$5 million carbon payment by US Banker Merrill Lynch